

1 illustrated by a ship's gyroscopic-compass. A ship's gyro-compass may be set,  
2 at the start of a voyage, to point North, but, as the ships sails North or South, the  
3 master gyro-compass will, in the absence of constant adjustment, ultimately be  
4 seen to point straight up and down. It senses no outside forces such as gravity  
5 or magnetism. In contrast to this, gravity-sensing tilt-sensors, such as bubble  
6 levels or plumb-bobs would consistently define "up" and "down" accurately  
7 throughout a voyage (and a magnetic compass would consistently define North  
8 and South).

9  
10 (Para. 9) All this illustrates the distinction between a gyroscope which is  
11 influenced by no external forces, and a gravity-sensing tilt-sensor that is  
12 influenced by gravity. As pointed out, above, the previous Richter patent uses  
13 gyroscopic reference, and the instant application references one or more gravity-  
14 sensing tilt-sensor(s). Thus the two are distinct at their very foundations.

15  
16 (Para. 10) The applicants respectfully assert that this distinction, clarified in the  
17 above amended claims, negates examiner's paragraph 6 grounds for §102(e)  
18 rejection due to anticipation by Richter (US 6,715,213 B2) of independent claims  
19 1 and 2, and by implication, the associated dependent claims, in that they  
20 incorporate all subject matter of claims 1 and 2 and add additional subject matter.  
21 This makes them *a fortiori* and independently patentable over the examiner's  
22 previously offered references. Claims thus effected include applicant's claims 3-  
23 4, 6-7, 12, 14-15, 18, 20-21, 26-31, 33 and 35, and examiner's paragraph 6  
24 §103(e) rejection of claims 3-4, 6-7, 12, 14-15, 18, 20-21, 33, and 35.

25  
26 (Para. 11) These are, in short, are not anticipated by Richter because claim 1  
27 and 2, or claims dependent on claims 1 or 2, are, in their amended states,  
28 distinct from those of Richter, as explained above.

29  
30 (Para. 12) The applicants further respectfully assert that this same distinction  
31 also negates grounds for examiner's paragraph 8, §103(a) obviousness rejection  
32 of claims 5, 8-11, 13, 16-17, 19, 22 32, 34, and 36 as unpatentable over Richter  
33 I, in view of Heger et al (US 5,956,260), Beckhart et al (US 6,526, 668 B1) and  
34 Franks (US 4, 546,551). This is because the qualities or characteristics claimed  
35 by the applicants are not, as amended, additions or modifications to the  
36 previously known Richter art, whether obvious or otherwise. They are not, in  
37 fact, based on the art of the Richter patent at all, but, entirely premised on the  
38 new art of the instant application.

39  
40 (Para. 13) Finally, applicants respectfully submit that this also negates the  
41 examiner's paragraph 9 §103(a) obviousness grounds for rejection of amended  
42 claims 2-4, 6-7, 12, 14, 18, 20-21, 26-31, 33, and 35. Further, it negates  
43 examiner's paragraph 9 §103 rejection of claims 304, 6-7, 12, 14-15, 18, 20-21,  
44 26-31, 33, and 35, and examiner's paragraph 10 §103(a) rejection of claims 5, 8-  
45 11, 13, 16-17, 19, 22-25, 32, 34, and 36.

46  
47 (Para. 14) Additionally, and in further response to examiner's paragraph 9,  
48 proposing rejection of the above listed claims as unpatentable over Richter in

1 view of Brunson et al (US 4, 549, 277), the applicants respectfully point out that  
2 Brunson always requires a plurality of sensors physically attached to a plurality of  
3 surfaces and used to independently measure the independent inclinations of  
4 each of those surfaces. (Compare Brunson claim 1, para. (a) and independent  
5 claim 12, para. (a) to the instant application claims 1 and 2.)  
6

7 (Para. 15) However, **in contrast**, although the instant art can incorporate a  
8 plurality of sensors, it **does not require a plurality of sensors nor does it**  
9 **require a plurality of surfaces**. Richter measures the angle, or angles, of one  
10 surface or plane using one or more sensors.  
11

12 (Para. 16) The above characteristic of the Brunson patent is further high-lighted  
13 by the feature laid out in Brunson claim 6 paragraph (a) wherein the **difference**  
14 of inclination of two remote surfaces is measured. This is explained in  
15 specification column 8, lines 10-18 and 60-68 and column 9, lines 1-14, and  
16 emphasized through the incorporation of a communication system between the  
17 remotely located points. (See column 12, lines 33-37.)  
18

19 (Para. 17) In contrast, the device of the instant art measures the angles, or angle,  
20 for one surface. It is not attached to that surface, but only pressed against it, laid  
21 upon it, or directed toward or by it, for long enough to take a measurement  
22 preferably, by means of orientation of a rigid case wherein the sensors are  
23 mounted. (See instant application claims 1, 2 and 29.)  
24

25 (Para. 18) In respectful response to examiner's noted, but not referred to, US  
26 patent application by **HAMAR (US 2004/0083616 A1)** and further discussion of it  
27 in the informal telephone conference of 23 SEP 2005, with examiner the  
28 applicants respectfully assert that the technology is distinctly discernable in that  
29 the **HAMAR art teaches only an electro-optical device, and requires electro-**  
30 **optical components** as sensor components. (I.E., it requires a light source and  
31 light sensors.) The art of the instant applicants does not comprise nor require  
32 these.  
33


34 (Para. 19) Further, the **HAMAR art does not teach calculation and generation**  
35 **of a display** (in this case a curved-tube bubble-level) as does the instant  
36 applicant. As opposed to calculating and generating a curved-tube bubble-level  
37 display where there was no curved-tube bubble-level, before, HAMAR teaches,  
38 instead, a system comprising an actual curved-tube bubble-level fitted with  
39 electro-optical sensors that effectively magnify and image of that bubble-level to  
40 produce a higher degree of accuracy for the user, providing, concurrently, a  
41 numerical read-out of the values sensed. **The instant applicant's art**  
42 **eliminates the actual bubble-level, entirely.**  
43

44 (Para. 20) The notable function of HAMAR is to provide increased accuracy and  
45 viewing accessibility for the viewer. It is, effectively, a "super-power bubble-  
46 level;" Essentially the electrical equivalent of a carpenter's bubble-level equipped  
47 with a magnifying glass and angled viewing mirror, Hamar merely senses,  
48 reproduces, conditions, and magnifies an image of an encased and physically

1 present, bubble level. RICHTER, in contrast converts signals from a mercury  
2 sensor to generate a simulation display of a bubble level. It contains no actual  
3 bubble-level.

4  
5 (Para. 21) The applicants' intent is that this application now be in complete  
6 compliance with all requirements for allowance and issue. If for any reason this  
7 application is not believed to be in full condition for allowance, applicants  
8 respectfully request the constructive assistance and suggestions of the Examiner  
9 in order that the undersigned can place this application in allowable condition as  
10 soon as possible and without the need for further proceedings.

11  
12 Very Respectfully,

13   
14  
15 David Douglas Winters  
16 Reg.# 50,746  
17

18  
19 Encl: (1) SPECIFICATION excerpt, Marked Up  
20 (2) SPECIFICATION excerpt, Clean Copy  
21 (3) CLAIMS LIST, Marked Up  
22 (4) CLAIMS LIST, Comprehensive  
23 (5) Submission of Corrected Drawings  
24 (6) USPTO Office Communication dated 06/28/2005  
25 (7) Credit Card Payment Auth for 2 months response time extension + *Petition*  
26

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1 level like) display format (112), or graphic vertical (round-dome bubble-level like) display  
2 format (113) [ and to the sensor alarm (45)].

3 The format button (120) is used to select the display format (numeric or graphic)  
4 preferred. The "ON/OFF/RESET" button (130) is used to switch the machine on and off  
5 and to internally mark a particular orientation of the machine for use as a baseline/zero  
6 point against which subsequent angles may be measured. The memory button (140) is  
7 used to record measurements and calculations for later reference. The laser button  
8 (150) is used to activate the laser reference pointer (60).

9 To exercise this embodiment, one presses the "ON/OFF/RESET" button (130)  
10 and orients the measuring device by pressing the case against one surface the angle of  
11 which one desires to measure. The display screen (20) will then show numeric or  
12 graphic information relative to the vertical as defined by gravity. (The device will  
13 automatically generate its output values according to whether it is positioned with its  
14 display facing upward or with facing to one side.) At this point, one may simply observe  
15 the information, or record the information by pressing the "MEMORY" button (140).

16 Additionally, one may again press the "ON/OFF/RESET" button (130) to redefine  
17 the baseline/zero point to equal the present orientation. Then the device may be moved  
18 to a new position and it will measure the new angle inscribed relative to the orientation  
19 had at the time the "ON/OFF/RESET" button was last pushed. At this point, the output  
20 values may again be observed or they may be recorded by pushing the "MEMORY"  
21 button (140) for later reference.

22 If the user desires to measure an angle to a remote point, he/she may substitute  
23 the laser reference pointer (60) for physical contact with the surfaces to receive angular  
24 measurement. Instead of the pressing the device against the surface(s) in question,